

Box 8

DEVELOPING MARKET SOLUTIONS TO IMPROVE THE FUNCTIONING OF CREDIT DERIVATIVES MARKETS

Some large corporate bankruptcies in 2005 had the potential to create adverse disturbances in credit risk transfer (CRT) markets, as some of the affected corporations had been used as reference entities in numerous credit derivatives transactions. The credit events following on from these defaults resulted in early settlement or renegotiation of a large number of credit derivatives contracts across many segments of the CRT markets. The fact that the eventual impact of these credit events was not as severe as might have been expected can, to an extent, be attributed to some recent innovations that have taken place in the credit derivatives market. Some of the most important of these innovations are described in this Box, which also draws some implications for market functioning.

Tradable Credit Fixings

Since the inception of the credit derivatives market, the industry has repeatedly called for more reliability in, and transparency of, pricing in the market. The market was seen as being extremely opaque, with no reliable prices generally available. Potential investors had to rely solely on the dealers' pricing, with little possibility to check their quotes against a market standard. As the traded volumes and market exposures grew and the end-investors' involvement increased, the need for an unbiased market price reference acceptable to all market participants became increasingly obvious. A solution came in March 2005 with the advent of Tradable Credit Fixings

("Credit Fixings") covering the European 5Y iTraxx CDS indices. These were developed by Creditex, Inc. ("Creditex") and Markit Group Limited ("Markit"), in cooperation with major credit derivatives dealers. Similar in concept to interest rate fixings used in other financial markets, such as EURIBOR and LIBOR, they are calculated from quotes submitted by a number of participating dealers. An important feature of Credit Fixings that makes them different from traditional fixings is that the published quotes are not mere indications, but instead represent a price at which a contributor is ready to trade. The fixing procedure includes a provision according to which transactions up to regularly traded market size can be executed during the auction process using the submitted price quotes. This provision aims at discouraging potential attempts by the fixing contributors to manipulate the fixings results, and makes the resulting prices more reliable.

Creditex and Markit worked closely together with a panel of seven dealers to develop and refine the Credit Fixings methodology. Dealers electronically contribute executable, two-way prices on the Creditex platform which are used to determine bid, mid and offer fixings and the resulting transactions. Markit oversees the process and disseminates the official fixing levels. The Credit Fixings take place each Friday with an additional fixing made on each of the quarterly International Monetary Market (IMM) roll dates.¹ Since the first official Credit Fixing on 21 March 2005, Credit Fixings have established their place in the market, providing a variety of immediate as well as potential uses. They can be used, for example, not only for pricing and marking-to-market credit derivatives positions, but also for pricing second-generation derivatives based on CDS indices (at present, an iTraxx futures contract is being developed by Eurex, probably to be launched during the second half of 2006).

Standardisation of cash settlement after credit events

The Credit Fixings methodology has also proven useful in the settlement process of several credit events recently. For some time, market participants had been calling for an efficient solution to the issue of settling outstanding credit derivatives contracts in the case of a default of the reference entity. When a credit event occurs, in order to be able to benefit from purchased protection, the buyer of protection needs to deliver the appropriate amount of the defaulted reference entity's obligation to the original protection seller. There are often mismatches, sometimes very large ones, between the amount of protection bought and the volumes outstanding of the underlying debt instruments that could potentially be delivered.² As corporate bonds issued by entities which have defaulted are often sought after by specialised distressed debt funds as well as by uncovered protection buyers (investors who bought protection but do not own any obligations of the reference entity, and have to find such deliverable obligations after the credit event), peculiar situations can arise whereby the prices of defaulted debt can soar to levels well above any reasonable recovery rate. Not only are such situations not welcomed by the parties involved, but they can also have broader negative implications, as they may distort the fundamental valuations of defaulted assets and create problems with the physical settlement of derivatives contracts. One solution to this issue is for credit derivatives contracts to be settled

1 The standard rollover dates for Chicago Mercantile Exchange (CME) financial futures contracts are in March, June, September and December each year.

2 For instance, Delphi, a major car parts maker and supplier to General Motors, defaulted on its debts in 2005. As the company held an investment-grade rating until end-2004, it was referenced in a large number of CDS indices and CDO transactions. It was also one of the most frequently traded names in the CDS market. A challenge was created by the fact that the amount of protection bought was estimated at more than USD 25 billion, while the volume of outstanding Delphi obligations including loans and bonds amounted to less than USD 5 billion.

in cash following a credit event. This makes the amount of bonds outstanding no longer relevant, and settlement can take place at fairer prices based on fundamentals.

Even though the possibility to opt for cash settlement is present in every bilateral credit derivatives contract, it has so far not been used to any great extent, mainly because of the difficulties in determining the market value of the contracts. Hence, a solution based on transparent and reliable pricing acceptable to most market participants was needed. The ISDA, an industry association, came up with a solution in the form of ISDA Protocols, which use the above-mentioned Credit Fixings methodology as an integral part of the process. Parties adhering to the Protocol join a multilateral agreement soon after a credit event to settle their credit derivatives contracts in cash, rather than by physically delivering bonds. The price used is determined by a Credit Event Fixing algorithm devised within the Protocol. Initially, the Protocols were only used for the cash settlement of contracts that formed part of a CDS index.³ Single-name CDS contracts were not included in the cash settlement process, and still had to be settled physically. This meant that investors holding offsetting positions in single-name and index contracts were exposed to the risk that the value of the cash settlement could differ substantially from the price of the bonds used for physical settlement, known as basis risk. The Protocols and the price-setting procedure were therefore updated to address this issue. The amended version of the ISDA Protocol was used for the first time in November 2005 to settle obligations arising from the default of Delphi Corp. Under the new version, in addition to entering a tradable bid and offer price as in previous Credit Event Fixings, auction participants also submitted their market and limit orders to buy and sell cash bonds. The algorithm then produced a final settlement price at which the signatories of the Protocol would buy and sell bonds to be used in the physical settlement of the single-name contracts, and which would also be used for cash settlement of index components. In addition, corresponding buy and sell orders were matched and actual bond trades were executed during the auction. The new methodology could potentially reduce the overall basis risk between cash and physically settled contracts, as the transparent and fair bond price determination should make market participants indifferent with regard to which of the two settlement methods they should use for all contracts covered by the Protocol. By permitting bond trading during the Credit Event Fixings, the Protocols also help ease the heavy burden imposed by credit events on the settlement operations of the banks involved.⁴ The ISDA work on the Protocols, integrating the physical and cash settlement procedures after credit events, continues with the aim of making the whole process smoother and even more attractive to the widest possible array of market participants.

Settlement Backlog

With the volume of trading growing exponentially, and back-office systems only being able to catch up slowly, many credit derivative trades have remained unconfirmed for weeks after being executed. In such a situation, if a credit event were to occur, it may prove very difficult to determine anyone's true exposure to the defaulted entity within the deadlines envisaged in the contracts.⁵ Regulators, in particular the UK's Financial Services Authority (FSA)⁶ and the

³ In such cases, the index must be readjusted because the defaulted entity component must be taken out and settled separately.

⁴ Another important contributor is the triReduce contract termination service provided by triOptima. For example, more than 5,800 single-name and 42,000 index contracts referencing Delphi have been terminated, with the bulk of terminations occurring close to the credit event (for a more detailed description of the triOptima service, see Box 17 in ECB (2005), *Financial Stability Review*, June).

⁵ This situation has been made worse by the common practice, especially among hedge funds, of reassigning trades to another counterparty without the original party's consent.

⁶ See the "Dear CEO letter" from February 2005, which may be found at http://www.fsa.gov.uk/pubs/ceo/derivatives_22feb05.pdf.

Federal Reserve Bank of New York (the Fed), have expressed their concerns about the number of unconfirmed trades on several occasions. Such concerns have also been voiced and addressed by the industry itself.⁷ Eventually, in October 2005, the Fed took a rather unprecedented step by making the largest credit derivatives dealers commit themselves to addressing this problem within several months. In a follow-up meeting in February 2006, the dealers were able to report that the number of trades remaining unconfirmed for more than 30 days had been cut by 54%, a larger improvement than the initial target of 30%. It was also reported that the share of electronically confirmed trades had risen to 62% of the entire trade volume, up from 46% in September 2005. Indeed, electronic confirmations, trade reconciliations and matching are on their way to becoming the industry standard, as most active investors as well as dealers now match their CDS trades using the Depository Trust & Clearing Corporation (DTCC) or LCH. Clearstream services.

Some of these innovations and developments that have been taking place in the credit derivatives market with a view to improving market functioning are also positive from a financial stability viewpoint. By providing transparency in, and enhancing the reliability of, the pricing of credit derivatives, Credit Fixings help the price discovery process. In turn, this should improve market liquidity and work towards reducing the risk of panic behaviour, a common characteristic of an opaque market environment. The ISDA Protocols using Credit Event Fixings should help in determining the fundamental recovery value after default by reducing, and indeed eliminating, the risk of market squeezes that can significantly influence the final settlement price. In so doing, investors' confidence in the results of bankruptcy processes should be enhanced. Furthermore, electronic confirmations, trade reconciliation and matching services should further facilitate improvements in straight-through processing, making manual intervention in the settlement of trades unnecessary. As the use of credit derivatives has become widespread, a smooth settlement process without significant backlogs should help prevent single counterparty problems from escalating into systemic threats.

⁷ See Counterparty Risk Management Policy Group (2005), "Toward greater financial stability: A private sector perspective", July (<http://www.crmgroup.org>).